



DEPARTMENT OF WATER RESOURCES

SBx7-7 Compliance Workshop

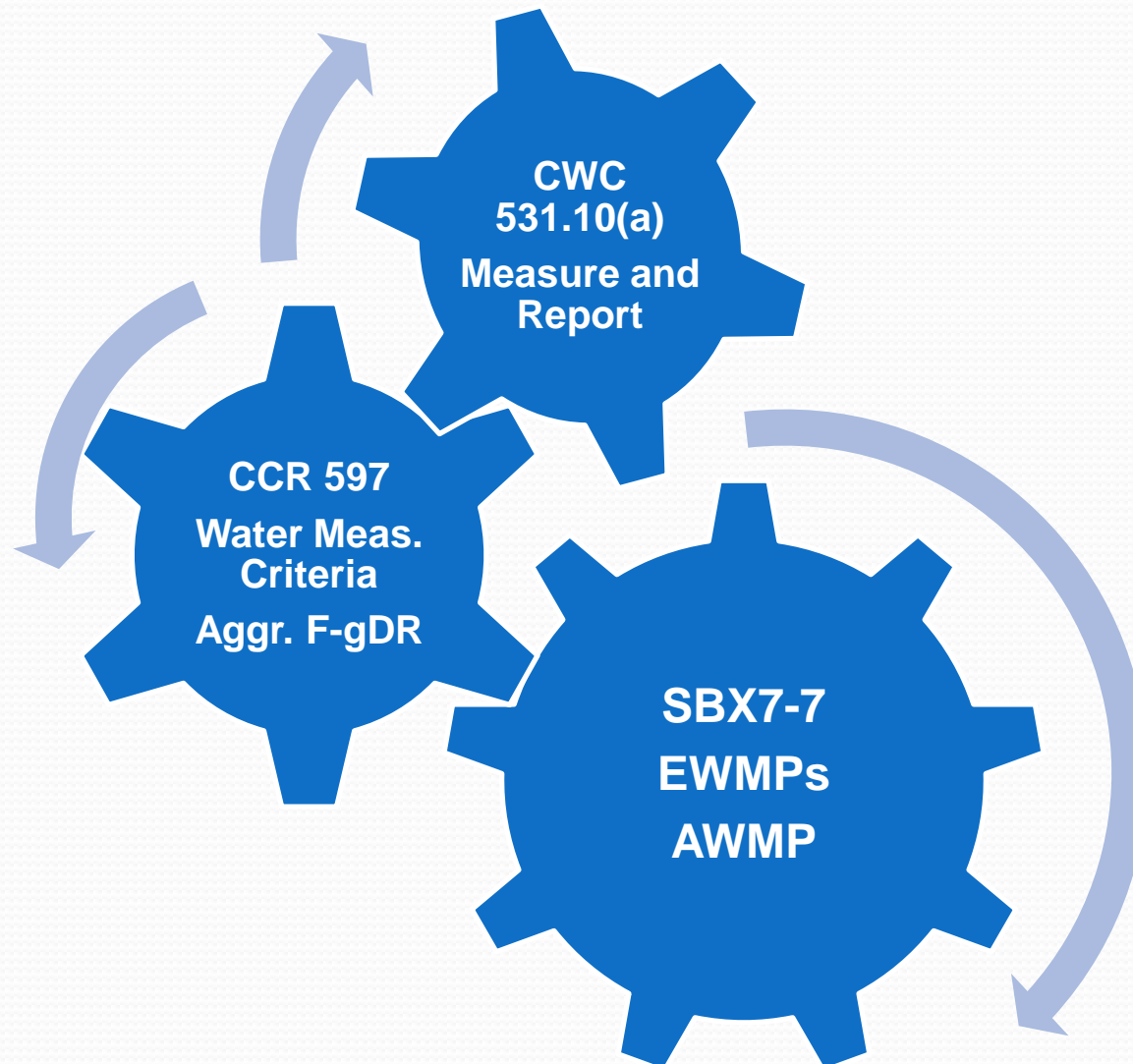
How to meet new water management planning, farm-gate measurement, volumetric pricing, and reporting requirements

September 7, 2012

Sponsored by the
Agricultural Water Management Council
Department of Water Resources
US Bureau of Reclamation (Aug 22nd and Sept 7 only)

Topics of the Presentation

- Compliance (Who is required to do what and when?)
- Efficient Water Management Practices (EWMPs)
- Preparing an Agriculture Water Management Plan
- Submittal of AWMP's
- Agriculture Water Measurement Regulation
- Aggregated Farm-Gate Delivery



Implement Critical EWMPs? (SBX7-7)

- *Required for agricultural water supplier providing water to 25,000 or more irrigated acres, excluding acres receiving recycled water.*
- *Required for agricultural water supplier 10,000 to 25,000 irrigated acres, excluding acres receiving recycled water, if sufficient funding has specifically been provided.*

Implementing Non-Critical EWMPs? (SBX7-7)

- *Required for ALL agricultural water suppliers if:*
 - Locally cost-effective and
 - Technically feasible

Prepare an AWMP? (SBX7-7)

- *Required for ALL agricultural water supplier providing water to 25,000 or more irrigated acres, excluding acres receiving recycled water.*
- *Required for ALL agricultural water supplier 10,000 to 25,000 irrigated acres, excluding acres receiving recycled water, if sufficient funding has specifically been provided.*
- AWMC-MOU and federal water suppliers alternative submittal allowed

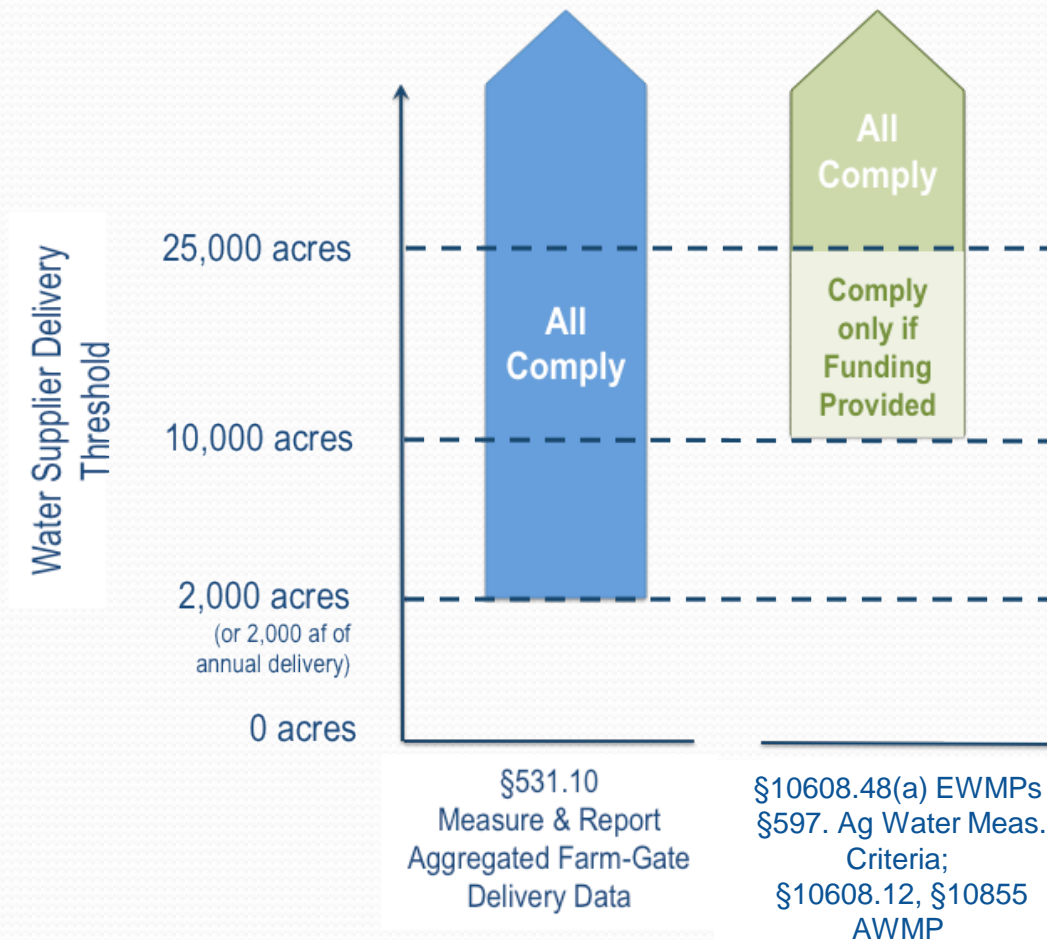
Water Measurement Criteria? (CCR §597.)

- *Required for agricultural water supplier providing water to 25,000 irrigated acres or more, excluding acres receiving recycled water*
- *Required for agricultural water supplier providing water to 10,000 to 25,000 irrigated acres, excluding acres receiving recycled water, if sufficient funding has specifically been provided.*

Aggregated Farm-Gate Delivery Report? (CWC §531)

- *Required for agricultural water supplier providing water to 2,000 acres of agricultural lands or 2,000 AF or more.*

Relationship of Agricultural Water Management Planning and Measurement Provisions



Important Dates

July 2012

- Implement the Measurement Regulation and any measurement device testing/certification in accordance with the Regulation.

July 31, 2012

- Begin implementing critical EWMPs and conditional EWMPs

December 31, 2012

- Submit 2012 Plan to DWR

July 31, 2013

- Submit Agricultural Aggregated Farm-Gate Delivery Report to DWR.

December 31, 2015

- Complete corrective action plans for agricultural water measurement devices

December 31, 2015

- Submit 2015 Plan to DWR

Implementing Efficient Water Management Practices (EWMPs)

EWMPs Required

(SBX7-7 §10608.48)

- Required for ALL agricultural water suppliers meeting size criteria identified above (SBX7-7 §10608.48(a))
- Critical EWMPs (SBX7-7 §10608.48(b))
- Other (conditional) EWMPs (SBX7-7 §10608.48(c))

Critical EWMPs

1. Agriculture Water Measurement: measure the volume of water delivered to customers with sufficient accuracy

Nexus

- CWC 531.10
- SBX7-7 Critical EWMP #1
- CCR 597

Critical EWMPs

2. Volume-Based Pricing Structure: adopt a pricing structure for water customers based at least in part on quantity delivered

Nexus

- SBX7-7 Critical EWMP #1
- SBX7-7 Critical EWMP #2

EWMPs Comparison

| SBX7-7 EWMP | AWMC MOU | USBR BMP |
|---|----------|--------------------------------|
| Critical | | |
| 1 – Water Measurement | C-1 | Critical 1 |
| 2 - Volume-Based Pricing | -- | Critical 4 |
| Conditional | | |
| 1 – Alternate Land Use | B-1 | Exemptible 1 |
| 2 – Recycled Water Use | B-2 | Exemptible 2 |
| 3 – On-Farm Irrigation Capital Improvements | B-3 | Exemptible 3 |
| 4 – Incentive Pricing Structure | C-2 | Exemptible 4 |
| 5 – Infrastructure Improvements | B-5 | Exemptible 5a Exemptible 5b |

EWMPs Comparison (cont.)

| SBX7-7 EWMP | AWMC MOU | USBR BMP |
|---|----------|---------------|
| Conditional (<i>continued</i>) | | |
| 6 – Order/Delivery Flexibility | B-6 | Exemptible 6 |
| 7 – Supplier Spill and Tailwater Systems | B-7 | Exemptible 7 |
| 8 – Conjunctive Use | B-8 | Exemptible 9 |
| 9 – Automated Canal Controls | B-9 | Exemptible 10 |
| 10 – Customer Pump Test/Eval. | -- | Exemptible 11 |
| 11 – Water Conservation Coordinator | A-2 | Critical 2 |
| 12 – Water Management Services to Customers | A-3 | Critical 3 |
| 13 – Identify Institutional Changes | A-5 | -- |

Agricultural Water Management Plan (AWMP)

Compliance Options

Option 1

- **SBX7-7 AWMP**

Option 2

- **AWMC-MOU** water management plan + additional documentation for EWMPs and Ag. Water Measurement Regulation

Option 3

- **USBR CVPIA/RRA** water conservation plan + additional documentation for Ag. Water Measurement Regulation

Option 1

- Prepare an AWMP in accordance with the Guidebook and SBX7-7 Article 2. Contents of Plans §10826
 - Include EWMP information
 - Include Agriculture Water Measurement Regulation documentation
- Coordinate with public and other entities in accordance with §10821(a) and Article 3. Adoption and Implementation of Plans

Contents of Plan

Section I: Plan Preparation and Adoption

- A. Description of Previous Water Management Activities
- B. Coordination Activities
- C. Plan Adoption and Submittal
- D. Plan Implementation

Contents of Plan

Section II: Description of the Agricultural Water Supplier and Service Area

A. Physical Characteristics - Description of:

1. Service area size
2. Location of the service area and water management facilities
3. Terrain and soils
4. Climate

Contents of Plan

Section II: Description of the Agricultural Water Supplier and Service Area

B. Operational Characteristics - Description of:

1. Operating rules and regulations
2. Water delivery measurements or calculations
3. Water rate schedules and billing
4. Water shortage allocation policies

Contents of Plan

Section III: Description of the Quantity of Water Uses of the Agricultural Water Supplier (Demands)

- A. Agricultural
- B. Environmental
- C. Recreational
- D. Municipal and industrial
- E. Groundwater recharge
- F. Transfers and exchanges
- G. Other water uses
- H. Optional – Projected Water Use

Contents of Plan

Section IV: Description of Quantity and Quality of the Water Resources of the Agricultural Water Supplier

A. Quantity

- 1. Surface water supply**
- 2. Groundwater supply**
- 3. Other water supplies**
- 4. Drainage from the water supplier's service area**

Contents of Plan

B. Quality

1. Surface water supply
2. Groundwater supply
3. Other water supplies
4. Drainage from the water supplier's service area

C. Water Quality Monitoring Practices

1. Source water
2. *Drainage water*

Contents of Plan

Section V: Water Accounting and Water Supply Reliability

A. Quantifying the Water Supplier's Water Supplies

- 1. Agricultural Water Supplier Water Quantities**
- 2. Other Water Sources Quantities*

Contents of Plan

Section V: Water Accounting and Water Supply Reliability

B. Quantification/Tabulation of Water Uses

Water delivered for agriculture (see AWMP Template Recommended Table V.6 with information from Table III.2):

- *Surface water*
- *Groundwater*
- *Recycled water*

Contents of Plan

B. Quantification/Tabulation of Water Uses (cont.)

How much is used for agricultural uses (see AWMP Template Recommended Table V.7 with information from Tables II.8 and III.3):

- *Crop consumptive use of water*
- *Amount of water used for leaching, if known*
- *Amount of water used for other cultural practices (e.g., seedbed preparation, climate control), if known*

Contents of Plan

- *Estimate of how much is lost through the delivery and storage system.*
- *Any water type water delivered for environmental, municipal, industrial, groundwater recharge/conjunctive use, and recreational purposes*
- *Water exchanges or transfers out of the service area*
- *Other water used/delivered for any other purposes (e.g., road dust suppression)*
- *Estimate of water lost in the storage and delivery system, if available*
- *How much occurs as recoverable surface and subsurface flows, if available.*
- *Estimate the quantity of irrecoverable flows*

Contents of Plan

C. Overall Water Budget

- *The overall amount of surface water and groundwater supplies, effective precipitation, and transferred water supplies delivered into the service area.*
- *How much is used for all purposes, including amounts delivered for environmental uses and inadvertent drainage from agricultural areas.*
- *How much leaves the service area through surface drainage. (see AWMP Template Recommended Table V.11)*

Contents of Plan

D. Water Supply Reliability

- *Conveyance infrastructure reliability*
- *Water storage reliability*
- *Contracted water reliability*
- *Natural reliability (such as hydrologic and climate uniformity)*
- *Land use alterations (these could affect the water demands, water supply sources, groundwater recharge locations, and other conditions)*
- *Pertinent regulations*

Contents of Plan

Section VI: Climate Change

Section VII: Water Use Efficiency Information

- EWMP Implementation and Reporting
- Documentation For Non-Implemented EWMPs
- Schedule, budget, and Finance Plan for Non-Implemented EWMP (Loan/Grant Eligibility)

Option 2

AWMC MOU Plans

- Prepare and submit a water management plan approved by the AWMC in accordance with the AWMC-MOU
- Attachment: EWMPs Documentation
 1. Report on EWMPs implemented, EWMPs planned for implementation, an estimate of efficiency improvements since the last report, and estimated efficiency improvements expected in the next 5 to 10 years
 2. Non-Implemented EWMPs not locally cost-effective or technically feasible documentation

- Attachment: Adopted Agriculture Water Measurement Regulation Documentation (as applicable)
 - A. Legal Certification and Apportionment Required for Water Measurement
 - B. Engineer Certification and Apportionment Required for Water Measurement
 - C. Description of Water Measurement Best Management Practices
 - D. Documentation of Water Measurement Conversion to Volume
 - E. Device Corrective Action Plan Required for Water Measurement

EWMPs Reporting

Non-Federal Ag. Water Suppliers

Nexus

- AWMP/AWMC-MOU plan
- § 1608.48(d), §10827 (EWMP Reporting)

Documentation in AWMP or water conservation plan:

- ☐ Information for the determination that an EWMP is not locally cost-effective or technically feasible

EWMPs Reporting

Non-Federal Ag. Water Suppliers (Cont.)

Report in AWMP or water conservation plan:

- ☐ EWMPs that have been implemented
- ☐ EWMPs planned to be implemented
- ☐ An estimate of the water use efficiency improvements that have occurred since the last report
- ☐ An estimate of the water use efficiency improvements estimated to occur five to ten years

EWMPs Reporting

Non-Federal Ag. Water Suppliers

| Recommended Table 49. Report of EWMPs | | | | |
|--|---------------------------------|--|---------------|--|
| EWMP No. | Description of EWMP Implemented | Estimate of Water Use Efficiency Improvements That Occurred Since Last Report* | EWMPs Planned | Estimated Water Use Efficiency Improvements 5-10 years in future |
| Critical EWMPs | | | | |
| 1 | | | | |
| 2 | | | | |
| Conditionally Required EWMPs (locally cost-effective and technically feasible EWMPs) | | | | |
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |

EWMPs Reporting

Non-Federal Ag. Water Suppliers

Recommended Table 50. Schedule to Implement EWMPs

| EWMP | Implementation Schedule | Staffing Requirements | Budget Allotment |
|---|-------------------------|-----------------------|------------------|
| Critical | | | |
| 1 – Water Measurement | | | |
| 2 - Volume-Based Pricing | | | |
| Conditional | | | |
| 1 – Alternate Land Use | | | |
| 2 – Recycled Water Use | | | |
| 3 – On-Farm Irrigation Capital Improvements | | | |
| 4 – Incentive Pricing Structure | | | |
| 5 – Infrastructure Improvements | | | |
| 6 – Order/Delivery Flexibility | | | |
| 7 – Supplier Spill and Tailwater Systems | | | |
| 8 – Conjunctive Use | | | |
| 9 – Automated Canal Controls | | | |
| 10 – Customer Pump Test/Eval. | | | |

EWMPs Reporting

Non-Federal Ag. Water Suppliers

Recommended Table 51. Non-Implemented EWMP Documentation

| EWMP # | Description | <i>(check one or both)</i> | | Justification/Documentation* |
|--------|-------------|----------------------------|----------------------------|------------------------------|
| | | Technically Infeasible | Not Locally Cost-Effective | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Notes:

*Justification/Documentation can include summary cost-benefit analysis or engineering determination with reference to the specific study/agency/engineer responsible for making that determination.

Option 3 USBR Plans

- Submit a USBR water conservation plan if:
 1. Adopted by supplier and submitted in the past 4 year (Jan. 1, 2009)
 2. Accepted as adequate by USBR
- Attach Water Measurement Documentation, as applicable

EWMPs Reporting

Federal Ag. Water Suppliers

Nexus

- USBR CVPIA/RRA plan
- § 1608.48(f)(BMPs equivalency)

No additional EWMP reporting/documentation required

Table i. Additional Documentation Summary

| Required by | Requirement details | SBX7-7 Plan (Option 1) | AWMC MOU Plan (Option 2) | CVPIA/RRA Plan (Option 3) |
|---|---|---|--------------------------------|--|
| Documentation Required as a Part of the Plan | | | | |
| Required by SBX7-7 | Table 49- Report of EWMPs | Required | | These suppliers may meet this requirement by submitting CVPIA/RRA Plan |
| | Table 51- Non-Implemented EWMPs | Required | | |
| Required by Regulation, where applicable | Attachment A- Legal Certification | Required | | |
| | Attachment B- Engineer Certification | Required | | |
| | Attachment C- Description of BPPs | Required | | |
| | Attachment D- Water Measurement Conversion | Required | | |
| | Attachment E- Correction Action | Required | | |
| Documentation Required for Loan and Grant Eligibility (if all water supplier has not implemented all the EWMPs) | | | | |
| Required by SBX7-7 | Table 51- Non-Implemented EWMPs | Required if any of the CWC 10608.48(c) conditional EWMPs is not locally cost effective or technically feasible. | | |
| | Table 50 - Schedule to Implement 10608.48 EWMPs | Required if all the CWC 10608.48 EWMPs have not been implemented. | | |

Guidebook Organization

Chapter 2

- SBX7-7 AWMP Preparation Guidance

Chapter 3

- AWMC-MOU Process Guidance

Chapter 4

- USBR CVPIA/RRA Process Guidance

Chapter 5

- Water Measurement Documentation

Appendix

- AWMP Template

Plan Submittal to DWR

What documents to submit?

- Accepted/adopted Plan
- Additional documentation required in the Plan

Plan format

- Hard Copy and an electronic copy

Plan Submittal to DWR cont.

All water suppliers should submit plans to DWR by December 31, 2012 to:

Fethi BenJemaa
901 P Street
Sacramento CA 95814

DWR Plan Review

- DWR will review all plans submitted
- Option 1&2 Plans meet SBX7-7 requirements if:
 - All EWMPs are implemented or planned for implementation
 - Not locally cost effective EWMPs are addressed
 - Efficiency improvements reported
 - Documentation required by regulation are included

DWR Plan Review

- Option 3 Plans meet SBX7-7 requirements if:
 - Plan is accepted by Reclamation
 - Documents required by regulation are included

These suppliers are encouraged to report efficiency improvements in their plans

Grant Eligibility

- Meet the SBX7-7 plan requirements (Options 1,2 or 3)
- OR
- Submit plan, schedule, and budget for implementation of EWMPs
 - Acreage stipulations apply (10,000 – 25,000)

DWR Report to the Legislature December 2013

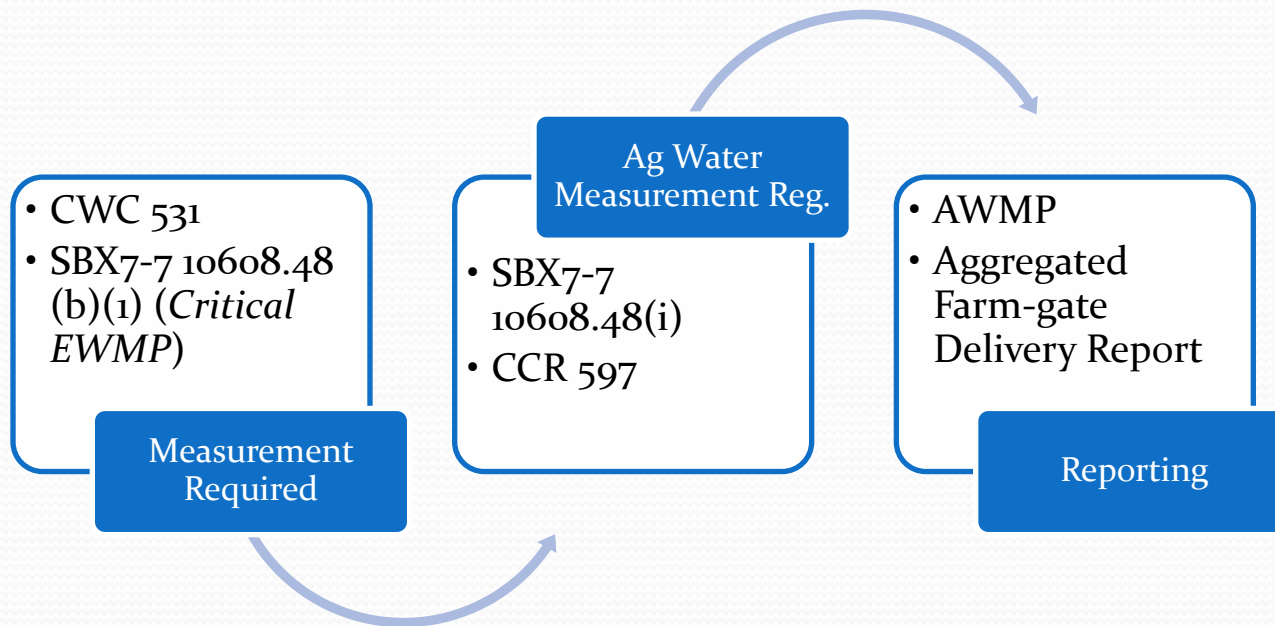
- Identify outstanding elements of the Plans,
- EWMPs that have been implemented and planned,
- Include an evaluation of the effectiveness of SBX7-7 in promoting efficient water management practices

Legislative Report

- An assessment of how the implementation of EWMPs has affected and will affect agricultural operations including an estimate of water use efficiency improvements,
- Include the efficiency improvements identified in the Plans, and
- Make recommendations to the Legislature on the effectiveness of the SBX7-7 and may make recommendations on proposed changes to the SBX7-7

Agricultural Water Delivery Measurements

Why Measure Ag Water Deliveries?



Measurements


- Farm-gate or Delivery Point of a single customer (CCR 597.3(a)) unless:
 - No legal access (CCR 597.3 (b)(1)(A))
 - Not technically feasible (CCR 597.3 (b)(1)(B))
- Measurement Accuracy: (CCR 597.3 (a))
 - Existing: 12% by volume
 - New or replacement:
 - 5% by volume lab certified
 - 10% by volume non-lab certified

Nonfarm-gate Measurements

- Document in AWMP, as applicable:
 - No legal access certification (CCR 597.3 (b)(2)(A))
 - Not technically feasible engineer certification(CCR 597.3 (b)(2)(B))
 - Volume-based apportionment methodology certification(CCR 597.3 (b)(2)(C))
 - Accounting for differences in customer water use
 - Sufficient for volume-based price structure (at least partially)
 - Approved by supplier's governing board

Initial Accuracy Certification

- Existing Devices (CCR 597.4 (a)(1)):
 - Random statistical field testing, OR
 - Engineer approved report on field inspections and analysis for ALL devices
- New/Replacement initial certification and documentation (CCR 597.4 (a)(2))
 - Lab Certification, OR
 - Non-Lab Certification:
 - Engineer affidavit
 - Engineer approved report documenting field-testing

- 
- 597.4 (b): Protocols for field testing of existing devices
 - 597.4 (c): Records retention requirements
 - 597.4 (d): Performance requirements
 - 597.4 (e): Reporting in AWMP requirements

Additional AWMP Documentation

- Document in AWMP, as applicable (CCR 597.4 (e)):
 - Description of BPPs (water measurement, frequency, method for determining irrigated acres, QA/QC procedures)
 - Conversion to measured values to volume
 - Non-compliant devices (by 2012 AWMP) corrective action plan for compliance by 2015.

Agricultural Water Delivery Reporting

Aggregated Farm-gate Delivery Report

- All agricultural water suppliers greater than 2,000 acres or if they deliver greater than 2,000 acre feet of water
- Acreage conditions
- Due to DWR July 2013
- Use the Article 2 Form (Regulation)

Agricultural Aggregated Farm-Gate¹ Delivery Reporting Format for Article 2

*Due annually beginning no later than July 31, 2013 from agricultural water suppliers subject to
Title 23, Division 2, Chapter 5.1, Article 2 of the CCR - Agricultural Water Measurement*

1. Water Supplier Information

Name: Address: Phone
Number: Fax: Total Number of Farm-Gates: Number of Measured Farm-Gates: Service Area Acreage:

2. Contact information

Name: Title: Address: Phone
Number: Fax: E-mail: Submittal date:

3. Aggregated Farm-Gate Delivery Data²: (provide monthly or bimonthly data, acre-feet)

| | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Total |
|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| Monthly Deliveries | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| | Jul-Aug | Sep-Oct | Nov-Dec | Jan-Feb | Mar-Apr | May-Jun | Total | | | | | | |
| Bimonthly Deliveries | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | | | | | | |

4. Explanations, Comments and Best Professional Practices³:

Note: An agricultural water supplier's total water use may be different from Aggregated Farm-Gate deliveries because measurement at these points may not account for other practices (such as groundwater recharge/conjunctive use, water transfers, wheeling to other agencies, urban use, etc).

1. "Farm-gate" means the point at which water is delivered from the agricultural water supplier's distribution system to each of its individual customers as specified in the Agricultural Water Measurement Regulation (Title 23, Division 2, Chapter 5.1, Article 2 of the CCR).

2. "Aggregated farm-gate delivery data" means information reflecting the total volume of water an agricultural water supplier provides to its customers and is calculated by totaling its deliveries to customers.

3. "Best Professional Practices" is defined in Title 23, Division 2, Chapter 5.1, Article 2 of the CCR, Section 597.2.

Thank you;

Questions?

